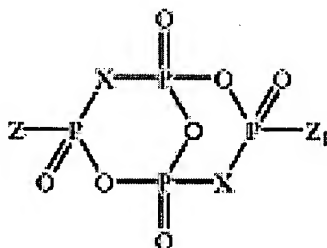


Amendments to the Claims

This listing of claims will replace all prior versions and listing of claims in the application:

Listing of Claims

1. (currently amended) A compound having the following structure:



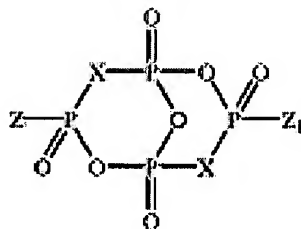
wherein

Z and Z₁, are the same or different and are alkyl, aralkyl, aryl, aminoalkyl, alkyloxy, aralkyloxy, alkylamino, aralkylamino, arylamino, alkylmercaptan, aralkylmercaptan, arylmercaptan, carbohydrate, nucleoside, steroid, or substituted glyceride; and

X is methylene (-CH₂-), mono- or di-halo methylene, ~~or -NR-, where R is H or alkyl.~~

2. (original) The compound of claim 1, wherein Z and Z₁ are carbohydrates and X is methylene or difluoromethylene.
3. (original) The compound of claim 1, wherein Z and Z₁ are nucleosides and X is methylene or difluoromethylene.

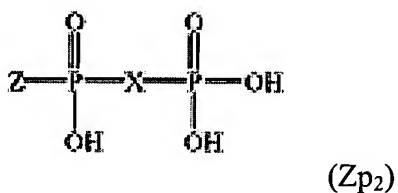
4. (currently amended) A method for the preparation of a compound having the following structure:



wherein

Z and Z₁ are the same or different and are alkyl, aralkyl, aryl, aminoalkyl, alkyloxy, aralkyloxy, alkylamino, aralkylamino, arylamino, alkylmercaptan, aralkylmercaptan, arylmercaptan, carbohydrate, nucleoside, steroid, or substituted glyceride; and

X is methylene (-CH₂-), mono- or di-halo methylene, or ~~NR~~, where R is H or alkyl; which method comprises reacting a compound having the following structure:



wherein Z and X are as described, with a dehydrating agent.

5. (original) The method of claim 4, wherein the dehydrating agent is a carbodiimide.

6. (original) The method of claim 5, wherein the dehydrating agent is dicyclohexylcarbodiimide or diisopropylcarbodiimide.

7. (original) The method of claim 4, wherein the starting material which is reacted with the dehydrating agent is selected from the group consisting of:

- 2', 3'-O-isopropylideneadenosin-5'-ylphosphonomethylenephosphonate,
- 2', 3'-O-isopropylideneinosin-5'-ylphosphonomethylenephosphonate,
- 2', 3'-O-isopropylideneguanosin-5'-ylphosphonomethylenephosphonate,
- 2', 3'-O-isopropylideneuridin-5'-ylphosphonomethylenephosphonate,
- 2', 3'-O-isopropylidenecytidine-5'-ylphosphonomethylenephosphonate,
- 3'-O-(tetrahydropyranyl) thymidin-5'-ylphosphonomethylenephosphonate,
- 2', 3'-O-isopropylidenetiazofurin-5'-ylphosphonomethylenephosphonate,
- 2', 3'-O-isopropylidene-3-ribofuranosylbenzamid-5'-ylphosphonomethylenephosphonate,
- 2', 3'-O-isopropylidene- Ψ -uridin-5'-ylphosphonomethylenephosphonate,
- 2', 3'-O-isopropylidene- Ψ -isocytidin-5'-ylphosphonomethylenephosphonate,
- 9-(2'-deoxy-2'-fluoro-3'-O-tetrahydropyranyl- β -D-arabinofuranosyl) adenine-5-ylphosphonomethylenephosphonate,
- 9-(3'-deoxy-3'-fluoro-2'-O-tetrahydropyranyl β -D-xylofuranosyl) adenine-5-ylphosphonomethylenephosphonate,
- 2'-deoxy-2'-fluoro-3'-O-tetrahydropyranyladenoin-5-ylphosphonomethylenephosphonate,
- 3'-deoxy-3'-fluoro-2'-O-tetrahydropyranyladenoin-5-ylphosphonomethylenephosphonate,

2', 3'-O-isopropylidene-9-deazaadenosin-5'-ylphosphonomethylenephosphonate,

2', 3'-O-isopropylidene-9-deazainosin-5'-ylphosphonomethylenephosphonate,

2', 3'-O-isopropylidene-9-deazaguanosin-5'-ylphosphonomethylenephosphonate,

2', 3'-O-isopropylideneadenosin-5'-ylphosphonodifluoromethylenephosphonate,

2', 3'-O-isopropylideneinosin-5'-ylphosphonodifluoromethylenephosphonate,

2', 3'-O-isopropylideneguanosin-5'-ylphosphonodifluoromethylenephosphonate,

3'-O-(tetrahydropyranyl) thymidin-5'-ylphosphonodifluoromethylene-
phosphonate,

2', 3'-O-isopropylidenetiazofurin-5'-ylphosphonodifluoromethylenephosphonate,

2', 3'-O-isopropylidene-3-ribosylbenzamid-5'-ylphosphonodifluoromethylene-
phosphonate,

2', 3'-O-isopropylidene- Ψ -uridin-5'-ylphosphonodifluoromethylenephosphonate,

2', 3'-O-isopropylidene- Ψ -isocytidin-5'-ylphosphonodifluoromethylene-
phosphonate,

9-(2'-deoxy-2'-fluoro-3'-O-tetrahydropyranyl- β -D-arabinofuranosyladenine-5-
ylphosphonodifluoromethylenephosphonate,

9-(3'-deoxy-3'-fluoro-2'-O-tetrahydropyranyl- β -D-xylofuranosyl) adenine-5-
ylphosphonodifluoromethylenephosphonate,

2'-deoxy-2'-fluoro-3'-O-tetrahydropyranyl-adenosin-5 ylphosphonodifluoro-
methylenephosphonate,

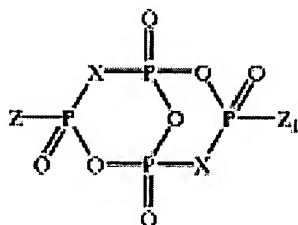
3'-deoxy-3'-fluoro-2'-O-tetrahydropyranyl-adenosin-5-ylphosphonodifluoro-
methylenephosphonate,

2', 3'-O-isopropylidene-9-deazaadenosin-5'-ylphosphonodifluoromethylene-phosphonate,

2', 3'-O-isopropylidene-9-deazainosin-5'-ylphosphonodifluoromethylene-phosphonate, and

2', 3'-O-isopropylidene-9-deazaguanosin-5'-ylphosphonoylphosphonodifluoromethylenephosphonate.

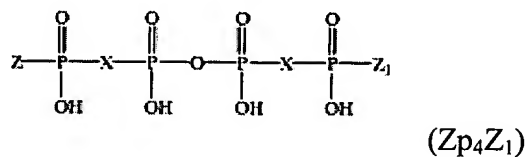
8. (currently amended) A method for the preparation of a compound having the following structure:



wherein

Z and Z₁ are the same or different and are alkyl, aralkyl, aryl, aminoalkyl, alkyloxy, aralkyloxy, alkylamino, aralkylamino, arylamino, alkylmercaptan, aralkylmercaptan, arylmercaptan, carbohydrate, nucleoside, steroid, or substituted glyceride; and

X is methylene (-CH₂-), mono- or di-halo methylene, ~~or -NR-, where R is H or alkyl~~; which method comprises reacting a compound having the following structure:



wherein Z, Z₁ and X are as defined above, with a dehydrating agent.

9. (original) The method of claim 8, wherein the starting material which is reacted with the dehydrating agent is selected from the group consisting of:

P^1 , P^4 -di (adenosin-5'-yl) phosphonomethylenephosphonic P^2 , P^3 -anhydride,

P^1 , P^4 -di [9- (2'-deoxy-2'-fluoro- β -D-arabinofuranosyl) -adenine-5'-yl]
phosphonomethylenephosphonic P^2 , P^3 -anhydride,

P^1 , P^4 -di [9- (3'-deoxy-3'-fluoro- β -D-xylofuranosyl) -adenine-5'-yl]
phosphonomethylenephosphonic P^2 , P^3 -anhydride,

P^1 , P^4 -di (2'-deoxy-2'-fluoroadenosin-- 5'-yl) phosphonomethylenephosphonic
 P^2 , P^3 -anhydride,

P^1 , P^4 -di (3'-deoxy-3'-fluoroadenosin-5'-yl) phosphonomethylenephosphonic
 P^2 , P^3 -anhydride,

P^1 , P^4 -di (inosin-5'-yl) phosphonomethylenephosphonic P^2 , P^3 -anhydride,

P^1 , P^4 -di (guanosin- 5'-yl) phosphonomethylenephosphonic
 P^2 , P^3 -anhydride,

P^1 , P^4 -di (uridin-5'-yl) phosphonomethylenephosphonic P^2 , P^3 -anhydride,

P^1 , P^4 -di (N⁴-acetylcytidin-5'-yl) phosphonomethylenephosphonic
 P^2 , P^3 -anhydride,

P^1 , P^4 -di (thymidin-5'-yl) phosphonomethylenephosphonic P^2 , P^3 -anhydride,

P^1 , P^4 -di (thiazifurin-5'-yl) phosphonomethylenephosphonic P^2 , P^3 -anhydride,

P^1 , P^4 -di (3-ribosyl- benzamid-5'-yl) phosphonomethylenephosphonic
 P^2 , P^3 -anhydride,

P¹, P⁴-di (Ψ-uridin-5'-yl) phosphonomethylenephosphonic P², P³-anhydride,

P¹, P⁴-di (Ψ-isocytidin-5'-yl) phosphonomethylenephosphonic

P², P³-anhydride,

P¹, P⁴-di (9-deazaadenosin-5'-yl) phosphonomethylenephosphonic

P², P³-anhydride,

P¹, P⁴-di (9-deazainosin-5'-yl) phospho- nomethylenephosphonic

P², P³-anhydride,

P¹, P⁴-di (9-deaz- aguanosin-5'-yl) phosphonomethylenephosphonic

P², P³-anhydride,

P¹, P⁴-di (adenosin-5'-yl) phosphonodifluoromethylenephosphonic

P², P³-anhydride,

P¹, P⁴-di (inosin-5'-yl) phosphonodifluoromethylene phosphonic

P², P³-anhydride,

P¹, P⁴-di (guanosin-5-yl) phosphonodifluoromethylenephosphonic

P², P³-anhydride,

P¹, P⁴-di (thymidin-5'-yl) phosphonodifluoromethylenephosphonic

P², P³-anhydride,

P¹, P⁴-di (tiazofurin-5'-yl) phosphonodifluoromethylenephosphonic

P², P³-anhydride,

P¹, P⁴-di (3-ribosylbenzamid-5'-yl) phosphonodifluoromethylenephosphonic

P², P³-anhydride,

P¹, P⁴-di (Ψ-uridin-5'-yl) phosphonodifluoromethylenephosphonic

P², P³-anhydride,

P¹, P⁴-di (Ψ-isocytidin-5]-yl) phosphonodifluoromethylenephosphonic

P², P³-anhydride,

P¹, P⁴-di (9-deazaadenosin-5.sup.1-yl) phosphonodifluoromethylenephosphonic

P², P³-anhydride,

P¹, P⁴-di (9-deazainosin-5'-yl) phosphonodifluoromethylenephosphonic

P², P³-anhydride, and

P¹, P⁴-di (9-deazaguanosin-5'-yl) phosphonodifluoromethylenephosphonic

P², P³-anhydride.

10. - 26. (cancelled)